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INTERNALIZING DISORDERS AMONG MISSISSIPPI PUBLIC SCHOOL STUDENTS
AND THE NEED FOR INTERVENTION

By

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A thesis submitted to the faculty of the University of Mississippi in partial fulfillment of the
requirements of the Sally McDonnell Barksdale Honors College.

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Abstract

Childhood anxiety disorders traditionally do not garner much attention in academic settings. However, many studies have concluded that approximately 1 in 8 children has an anxiety disorder by age 12, often beginning at earlier ages but going undiagnosed. Further, studies have shown that these disorders strongly affect both behavior (e.g. bullying, school attendance, and social performance) and academic performance (e.g. literacy, mathematical learning). Under several existing pieces of legislature, public schools should already be providing treatment for these disorders; however, due to financial costs and the silent nature of these internalizing disorders, few schools have any provisions for the numerous students silently struggling. The primary objective of this study was to show rates of anxiety and depression in a broad sample of Mississippi students from public school districts around the state in order to evaluate the need for interventions. Participants included 10,891 students from a wide variety of school districts, ranging in grade levels from 2-12. The ethnicity of students was highly diverse and representative of the state of Mississippi. The diagnostic measure used was the Revised Childhood Anxiety and Depression Scale, which measures symptoms of social phobia, panic disorder, major depression, separation anxiety, generalized anxiety, and obsessive-compulsive disorder. As hypothesized, given the low socioeconomic status of the area, the rates of depression and anxiety in students from Mississippi are slightly higher than the national average; however, it is important to note there are many possible contributing factors. Given these findings and the outlined risks associated with these disorders, public education should be providing clinical interventions for students with internalizing disorders.

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Introduction to Internalizing Disorders

Internalizing Disorders. Internalizing disorders, such as anxiety disorders, depression, and obsessive-compulsive disorder, are labeled as such because of the emotional dysregulation that is a central feature of all three disorders (Kovacs & Devlin, 1998). Emotional dysregulation is used to define extreme difficulty in regulating, changing, or tolerating emotional states that are unpleasant or uncomfortable such as anger, disgust, sadness, or anxiousness. At present, it is difficult for educators to notice emotional dysregulation, since it tends to be observable by only the individual experiencing it. Further, internalizing disorders are easily misidentified as physical illness. Claminess, nausea, and upset stomach are symptoms of intense emotional activation associated with anxiety disorders, and children with depression are known to complain of nausea, headache, and fatigue in addition to losing appetite (Hannesdottir & Ollendick, 2007; Charles & Fazeli, 2017). In the context of schools, the end result of this covert nature (and occasional “sickly” behavior) is that children with internalizing symptoms are often overlooked for submission to Child Find committees and Individualized Educational Plan (IEP) evaluations, particularly in comparison to children with externalizing behaviors (which are frequently disruptive to the academic environment; Mychailyszyn, 2010).

Overview of Anxiety. Anxiety, as an emotion, is “apprehensive uneasiness or nervousness usually over an impending or anticipated [event or outcome]” (Merriam-Webster). This emotion is an extremely normal, and sometimes beneficial, emotion. The emotional experience of anxiety can, in small amounts, encourage people to study, practice, or prepare for upcoming experiences in life. The line between beneficial anxiety and impairing levels of anxiety is something of a tightrope as an emotion; too much or too little anxiety may lead to impairment in day-to-day functioning. At high levels of anxiety, clinicians typically diagnose an

anxiety disorder, which is a broad term used to describe a set of conditions with shared emotional and/or physiological responses to a stressor. Anxiety, as a category of psychological disorder, is different from the emotional experience of normative anxiousness in that it is characterized by impairment in normal functioning. Therefore, the presence of an anxiety disorder diagnosis implies that the afflicted individual experiences the emotional and physiological arousal of anxiousness to such a degree that they present a barrier to normal functioning in their day-to-day life.

Across all types of anxiety disorders, core symptoms of physiological arousal can include nausea, increased heart rate, increased blood pressure, tremors in the hands, pupil dilation, hot and cold flashes, and tightness in the chest and/or throat. Often, these sensations culminate in the phenomenon of a panic attack (discussed further when describing panic disorder more specifically below), but similar somatic activation/panic symptoms can occur across all anxiety disorders. The emotional arousal of anxiety disorders can include intense feelings of fear, confusion, unreality (i.e., a dreamlike state where one's surroundings are not perceived as being reflective of reality), and/or separation from the self (i.e., dissociation). These symptoms can also vary as a function of the specific anxiety disorder, which is detailed in the review of individual diagnoses below.

While aspects of the individual's life impairment may change depending on the specific type of anxiety disorder, child and adolescent anxiety disorders are associated with significant impairment in school functioning, family life, and social skills development (Benjamin et al., 1990). Even more alarming, childhood anxiety disorders are predictors of suicide attempts and psychiatric hospitalization (Ferdinand & Verhulst, 1995). On the less life altering end of the spectrum, children with any type of anxiety disorder tend to be rated by their peers as shy,

more socially withdrawn, less popular, and less likable relative to children who are not anxious (Mychailyszyn, 2010). This may be due in part to the fact that children with anxiety disorders tend to become easily upset and lash out at people (i.e., verbally admonishing, using hateful language, or physically aggressive behavior; Kendall & Pimentel, 2003). Similarly, there is evidence that children with significantly higher anxiety scores than their peers were more frequently categorized as victims of bullying and/or bully-victims (i.e., those who both bully and are victims of bullying) in a study by Isolan et al. (2013). Children with clinical levels of anxiety have also been shown to exhibit significantly higher school absenteeism compared to non-disordered peers, which in turn increases longitudinal risk for dropout (Ingul et al., 2012). Hodges & Plow (1990) also found that children with anxiety disorders tested as having lower average IQ scores than children without anxiety disorders; however, the consensus of the field has been that children with anxiety disorders are not generally different in their cognitive functioning than their peers (Weeks et al., 2014). Rather, interpretations of this observation have posited that clinically anxious children had lower average IQ scores because of mental preoccupation with their anxiety and worry, their lack of school attendance, and the overall cognitive impact of their chronic anxiety levels (Hodges & Plow, 1990). The impact of absenteeism, preoccupation, and cognitive impacts becomes more salient with the knowledge that children in the top quartile of anxiety scores are nearly eight times more likely to be in the lowest quartile of reading achievement and two-and-a-half times more likely to be in the lowest quartile in math achievement later in their educational efforts (Mychailyszyn, 2010). Further, these impairments may also be associated with other common symptoms anxiety disorders, such as difficulty concentrating and sleep disturbances (Kendall & Pimentel, 2003). Overall, symptoms in physical, emotional, behavioral, and social domains are interrelated such that they

form something of a ‘snowball’ effect during development that becomes progressively worse over time.

Alarming, research has shown that anxiety disorders can be present in children as young as preschool age (Angold & Egger, 2007). Furthermore, basic psychological assessment of children as young as 4 years old can successfully predict the presence of later psychological diagnosis at age 6 (Wichstrom et al., 2013). Similarly, Ialongo et al. (1995) gave 1st grade students basic self-report surveys about anxiety symptoms and found them to be predictive of the same students’ scores in the 5th grade. Students who had been in the top $\frac{1}{3}$ for anxiety symptoms earlier in life were twice as likely to be found in the top $\frac{1}{3}$ of symptom experiences in the 5th grade, suggesting stability of symptoms across this 4-year span (and, it can be inferred, educational impairment on that basis). Early onset anxiety disorders (<13 years old) have also been found to have a more severe and disabling nature and tend to become chronic without clinical intervention (Simon & Bogels, 2009). Therefore, children and adolescents with anxiety disorders who are struggling with the aforementioned ‘snowball’ effect of symptoms are not likely to improve on their own. If anything, students with anxiety disorders are more likely to progressively worsen overtime without intervention, which in many cases may be optimally provided through their schools.

Common Anxiety Disorders in Children and Adolescents

Social Anxiety/Phobia. Social phobia is a fear of social situations or avoidance of social situations, usually due to fear of negative judgement by other people or individuals (ICD-10, pg. 113). Social phobia can be specific to things such as, but not limited to, “eating in public, public speaking, and encounters with the opposite sex;” however, symptoms may be manifest in a way that is generalized to all (or nearly all) social interactions. The result of this anxiety in social

situations is typically avoidance of the situations or activities that trigger anxiety (ICD-10, pg. 113). This can lead to severe social impairment, school absenteeism, and isolation due to social withdrawal. In fact, social phobia was found by a study to have impairment in the highest number of school functioning categories compared to other common psychopathologies (Muris & Meesters, 2002).

Separation Anxiety. Most small children experience anxiety when a parent or primary caretaker is absent, but some children's anxiety exceeds typical levels and becomes clinically significant at a certain point. Separation anxiety disorder may be diagnosed when the anxiety persists in school-aged children and is so severe that it impairs social functioning (ICD-10, pgs. 214-215). The primary distinguishing symptom of separation anxiety is an unreasonable, excessive worry about possible harm befalling the child and/or parent when a caretaker is absent, or that some unfortunate event would separate the child from the primary caretaker indefinitely (ICD-10, pg. 215). Other symptoms can include fear of being alone, school refusal, and refusal to sleep without the presence of the primary caretaker (who is very often the child's mother, although this is not necessarily the case). Children may also engage in a variety of externalizing behaviors in reaction to their separation from their primary caretaker, including crying and tantrums (ICD-10, pg. 215).

Panic Disorder. Panic disorder is characterized by the episodic onset of sudden, severe anxiety symptoms without any particular set of circumstances or a situation that prompts this experience (i.e., symptoms are unpredictable in their onset; ICD-10, pg. 115). The episodes are typically brief (i.e., less than 10 minutes), but the individual often experiences this very strongly and retreats from whatever situation he/she might be in when the attack begins (ICD-10, pg. 115). This frequently results in generalized avoidance of situations or circumstances that are

anticipated to be associated with future panic episodes. Similarly, the individual may express a fear of having further attacks, which reciprocally contributes to further avoidance and exacerbation of symptoms (ICD-10, pg. 115).

Generalized Anxiety Disorder. Generalized anxiety disorder is an anxiety disorder which is not bound by any specific phobia or environmental circumstances, so it is not specific in nature like the other anxiety disorders outlined in this paper (ICD-10, pg. 115). Although the specific symptoms are highly variable, the disorder is typically associated with worry that is accompanied by physiological symptoms (such as those outlined above). This generalized worry is often also associated with concern over ambiguous future events (e.g., specific disasters) and/or a general sense of foreboding in unpredictable situations (ICD-10, pg. 115).

Obsessive-Compulsive Disorder

Marked by obsessive thoughts or compulsive acts, obsessive-compulsive disorder in children results in great discomfort when the individual tries to resist their compulsions or thoughts (ICD-10, pg. 117). This “discomfort” can be experienced as a sensation of disgust, physiological reactions of anxiety, or a combination of both (Whitton et al., 2015; Knowles et al., 2018). When anxiety-driven, this discomfort typically presents as an arousal of anxiety-related symptoms, as outlined under the “physiological and emotional arousal” subsection of anxiety disorders, because OCD of this nature is related to internalizing fear (i.e., internalizing disorder symptoms; Rozenman et al., 2017). Unlike anxiety-driven OCD, disgust-driven OCD is associated with disgust proneness, which comprises how easily a person is disgusted and how they perceive the experience of disgust (Knowles et al., 2018). Children with OCD, like other forms of internalizing disorders, are functionally impaired in areas such as family life, social

skills, school, and daily living skills due to the symptoms of compulsive actions or thoughts and obsessiveness surrounding a given topic (Piacentini et al., 2007).

Major Depressive Disorder

Whereas anxiety results in the hyper-physiological arousal of the body due to the “fight or flight response,” depressive symptoms tend to result in the opposite physiological impact. People experiencing depression are likely to have difficulty experiencing the physiological sensations associated with emotions such as happiness, surprise, and arousal. This can begin occurring in children as young as preschool age (i.e. 4 - 5 years old; Hirshfeld-Becker et al., 2011). The symptoms of depression in adults can include depressed mood, lack of interest, somatic symptoms, sleep disturbance, appetite disturbance, poor concentration, motor disturbances, negative cognitive cycles, suicidal ideation, and poor overall functioning (Charles & Fazeli, 2017). In children, these symptoms translate in different ways. For example, depressed mood is more likely to be seen as irritability, temper tantrums, crankiness, and pervasive unhappiness (Charles & Fazeli, 2017). Lack of interest may be noticed in a loss of interest in play, motor disturbances may come across as walking slowly or restlessness, and functional disturbances may appear as terse relations with family and friends or poor academic functioning (Charles & Fazeli, 2017). Alarming, children who show symptoms at a very early point in their development are at a statistically much greater risk of suicide as they enter adolescence (Emslie & Mayes, 1999).

While in adults, there is a 2:1 ratio of depression in women to men, in children the rates of depression between gender do not vary significantly (Charles & Fazeli, 2017; Emslie & Mayes, 1999). There is no apparent difference in the rates of depression in men and women until

after the onset of puberty; however, by age 18 an estimated 20% of girls have experienced a depressive episode, whereas the percentage of boys is significantly lower (Brown et al., pg. 69).

Academically, like children with anxiety disorders, children with depression are likely to fall behind in mathematics due to their tendency to become disinterested and inattentive to classroom activities (Hodges & Plow, 1990). Since mathematics is a subject that depends on building upon past knowledge and lessons, it is often the first subject in which a child's educational deficit may be clearly seen (Hodges & Plow, 1990). Children and adolescents with depression are also likely to be victims of bullying and to fall behind in social development, especially because of the tendency to withdraw from social situations (Kaltiala-Heino et al., 2009). Depression in children is also associated with family financial strain, like anxiety (McLaughlin et al., 2011). In adolescents, depression may also be associated with antisocial behaviors, such as bullying, drug use, and suicidal thoughts or actions (Brown et al., pg. 69).

Risk Factors for All Internalizing Disorders. The prevalence rates of anxiety disorders are impacted by other factors which can either lower or increase risk. For instance, socioeconomic status has a well-documented relationship with the onset of childhood anxiety disorders. One study found that childhood financial hardship both predicted and increased the odds of anxiety, depression, and OCD onset as well as all other forms of childhood disorders by approximately double (McLaughlin et al., 2011). Moreover, low parental education level, which goes hand-in-hand with low socioeconomic status, significantly predicts the severity and staying power of the disorder (McLaughlin et al., 2011). This is an especially alarming fact as it pertains to the state of Mississippi, which has a well-documented high rate of poverty and low socioeconomic households, as well as some of the lowest rates of education in the United States.

Another risk factor for anxiety disorder development is gender. Specifically, being female is considered a risk factor for all disorders except social anxiety disorder, which has an approximately equal number of diagnoses between men and women (McLean et al., 2011). Moreover, women diagnosed with an anxiety disorder are more likely to be diagnosed with another psychological disorder (McLean et al., 2011). Alternatively, there is also evidence that shows that boys and girls may experience the same level of psychological distress surrounding anxiety, but males may experience somatic anxiety symptoms differently than girls, leading to the disparity in diagnosis rates (Walsh et al., 2004).

Internalizing Disorders and Schools In Public Policy

General Policies and Terms

Under the Individuals with Disabilities Education Act (IDEA) amendments of 2004, the internalizing disorders outlined above should already be regularly attended to in school settings through IEPs and other formal supports to the extent they result in barriers to educational attainment. The IDEA initiative was developed to ensure that students with disabilities had adequate access to services and accommodations to ensure that their specific disabilities did not have a deleterious impact on the quality of their educations. Under the IDEA policies, and given the wide reaching impacts of the symptoms found in internalizing disorders, psychological diagnoses are considered disabilities. IDEA policy defines a child with a disability as a child with, “... serious emotional disturbance...” and even elaborates that children ages 3 through 9 may also be included in that terminology when experiencing, “social or emotional development [delays]” (IDEA, pg. 8). Based on previously outlined impacts of anxiety, depressive, and obsessive-compulsive disorders, most children and adolescents experiencing an internalizing disorder would meet IDEA criteria for educational services. Each state within the United States

is also expected to create their own State Department of Special Education following these federal guidelines. The Mississippi Department of Education follows the guidelines from IDEA, which classifies emotional disturbance as: "...a condition exhibiting.... an inability to learn that cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; a tendency to develop physical symptoms or fears associated with personal or school problems..." (Weatherly, pg. 2). These symptoms must occur "over a long period of time and to a marked degree that adversely affects a child's educational performance" (Weatherly, pg. 2); however, there is no formal definition of what constitutes a "long period of time," and most psychological disorders are not short lived. All of the qualifiers potentially apply to internalizing disorders, but the latter three qualifiers are very directly associated with the symptoms described above in reviewing anxiety disorders, major depressive disorder, and obsessive-compulsive disorder.

Identification

Currently students meeting these criteria are eligible for "Child Find," a provision of IDEA policies. Child Find policy asserts that all children with disabilities "who are in need of special education and related services [must be] located and evaluated... a practical method [should be] developed and implemented to determine which children with disabilities are currently receiving needed special education and related services" (IDEA, pg. 27). "Related services" does include psychological services, social work services, and early identification and assessment according to IDEA (Weatherly, pg. 3). Child Find requests start in motion an evaluation process for children with suspected disability. According to the Mississippi

Department of Education's Office of Special Education State Policy 74.19 Volume I guidelines, anyone who "has knowledge of or interest in a child ages birth through twenty-one (21) years, including but not limited to parents, teachers, and Teacher Support Team (TST) members, or representatives of other public agencies" may recommend a child for the Child Find process (pg. 7). Alarming, children are seldom included in the Child Find process (meaning that children typically do not refer themselves), and due to their general lack of outward symptoms are also frequently not recommended for this process by other people. Moreover, the afflicted individual may be the only person aware of the symptoms at all, thus facilitating long-term impairment before it is visible to anyone else.

One solution to this tendency for internalizing symptoms to be overlooked is application of broad (potentially even universal) student screening for anxious, depressive, and/or obsessive symptoms. According to Mychailyszyn et al. (2011), the "gold standard of assessment is a multimethod, multi-informant approach. This means that in order to best serve students with internalizing disorders, the education system should be using multiple people in each child's life, including the child, to give a complete picture of symptoms. To accomplish this on a broad scale that potentially includes every student; however, this multifaceted method is likely untenable. Instead, screening via child self-report measures may be the best option, given that they are time/cost effective and there are numerous options for scientifically supported instruments (Mychailyszyn et al., 2011). As an example, Balle & Tortella-Feliu (2010) conducted a study in which they screened for anxiety and depressive symptoms using a few simple self-report measures in a school setting with child and parent consent. Using the surveys, they identified 130 children out of 613 who were in the top 80th percentile of anxiety and/or depressive symptoms. The screeners used in their study were simple pencil and paper assessments, each taking no more

than approximately 5 minutes to complete and costing little. This could potentially be an effective way for Child Find requirements to be adequately met and address the problem of identifying hard to identify disorders.

Evaluation

Following Child Find initial recommendation for assessment, children are required to be assessed by a team of evaluators. In the context of Mississippi Department of Education's policies on IDEA, "The MET [multidisciplinary evaluation team] must [include]... qualified professionals... who can administer individual diagnostic assessments and interpret the results..." (Mississippi Special Education Policy 74.19, pg 31). Evaluations conducted by one or more mental health professionals are utilized in determining students' eligibility for services, and potentially in the development of an Individualized Educational Plan (IEP), if warranted.

Treatment

General Provisions of IDEA. The IEP for a student with internalizing disorders should resemble something close to a psychological intervention. After all, IDEA legislation states that, "a state policy that is in effect... ensures that appropriate early intervention services based on scientifically based research... are available" (IDEA, pg. 76). Congress additionally added in their findings of IDEA that "an effective educational system serving students with disabilities should... coordinate State and local education [and] mental health... in addressing the full range of student needs" (IDEA, pg. 89). Therefore, mental health services following evidence-based practices should be provided in schools.

Further, under IDEA, students are also entitled to an education in the "least restrictive environment" possible (often abbreviated as LRE). LRE, simply stated, ensures that students with disabilities are offered an environment of inclusion with non-disabled peers in regular

education classrooms to the extent possible. Therefore, as it pertains to the identification and treatment of internalizing disorders, students with such emotional disabilities are entitled to treatment that does not impact their education negatively or remove them from a regular education environment. In this case, one approach that is often implemented is to remove students from classes in the same way that many “gifted” programs remove students for extra enrichment (but for the purposes of receiving behavioral interventions). By removing students for one hour from extracurricular classes such as music and art once a week for approximately one semester, schools can provide clinical supports as outlined below.

Examples of Evidence-Based Practices: Once diagnoses are determined for students in school systems, the process of determining accommodations must be made. The best accommodation that can be made for students with anxiety disorders, depression disorders, or obsessive-compulsive disorder may often be clinical psychological interventions (i.e., therapy focused on reduction of psychopathological symptoms) that allow them to maintain their regular classroom placement. For internalizing disorders, cognitive-behavioral therapy (CBT) is generally the most evidence-based of these potential treatments. This can be delivered in a one-to-one format where resources are available, or in a group setting (with equivalent outcomes; Lieber et al., 2008; Manassis et al., 2002; Rossello et al., 2008; Keles & Isdoe, 2018).

In either case CBT entails recognizing maladaptive cognitions, disrupting maladaptive behavior cycles, and teaching adaptive physiological and psychological coping strategies. Whereas in individual CBT the therapist tailors techniques and examples to the person’s specific disorder, in a group format the therapist may have to engage in more generalized examples given heterogeneity of diagnostic presentations. Independent of format, there are several specific,

manualized approaches to CBT for internalizing symptoms with support from randomized controlled trials.

Unified Protocol is a type of CBT directed at impacting negative affectivity, a measure of sensitivity to negative information or situations (Chorpita, 2007). Essentially, the higher the level of negative affectivity within an individual, the more sensitive they are to adverse emotional responses to negative stimuli. Children with negative affectivity tend to be, by temperament, more anxious, sad, or worrisome, which can lead to anxiety disorders and depression (Chorpita, 2007). Because a professional delivering treatment in schools could use one manual to target a main contributing factor in anxiety, depression, and obsessive-compulsive disorder, the Unified Protocol is potentially among the most cost effective and simple tools to target internalizing disorders in students. In 2017, Ehrenreich-May et al. did a randomized controlled trial of Unified Protocol for adolescents with emotional disorders in group format (n=27) compared to a waitlist group (n=24). The treatment group went through modules centered around psychoeducation, exposure, and practice of exposure independently and averaged approximately 15 sessions. Not only did the participants receiving treatment improve in symptom management and decrease their functional impairment, but they also continued to improve after treatment was completed. As further evidence of the Unified Protocol's potential for school implementation, the participants in the 2017 study were not excluded for behavioral difficulties such as oppositional defiant disorder, ADHD, or conduct disorder; so long as the primary diagnosis was an internalizing disorder, children with comorbid externalizing disorders could be allowed to participate. Other manuals can also be effective, however, and therefore require deeper elaboration.

One of the most well-known manualized treatments for anxiety disorders is Coping Cat (Kendall & Hedtke, 2006), which is a treatment manual consisting of 16 structured, 1-hour sessions. The first 8 sessions are focused on addressing cognitive and emotional goals and psychoeducation. The remaining 8 sessions are focused on gradual in-vivo exposure. A key component of the Coping Cat manual is the FEAR plan, which is taught during the psychoeducation phase of the manual. “F” stands for “feeling frightened” and focuses on identifying somatic or sensory sensations during anxiety or depressed states. Children are taught to understand and recognize bodily cues of anxiety or depression and, therefore, how to cope with those sensations. “E” stands for “expecting bad things to happen” and involves teaching children to recognize negative cognitions or expectations that contribute to anxiety or depression. Subsequently, children are taught to evaluate their expectations and rationalize them to generate better coping thoughts. “A” stands for “attitudes and actions that help” and involves children learning to problem solve their own experiences and find positive ways of handling them. Lastly, “R” stands for “rewards and results.” During this step, children are taught to appreciate their own attempts at coping and reward themselves for effort. The second key component of Coping Cat includes in-vivo exposure for anxiety or behavioral activation for depression. The downside to using the Coping Cat manual is that it is not traditionally adaptable; the progression through the FEAR plan is sequentially based. However, Lau et al. (2010) were able to adapt the Coping Cat manual from 16, 1-hour meetings to 9, 2-hour meetings. Despite changing the structure of treatment delivery, they were able to treat the children with equitable success to the traditional format. This may indicate that Coping Cat is somewhat more flexible than previously realized.

FRIENDS is an adaptation of Coping Cat that has 10 weekly sessions and two booster sessions falling 1 month and 3 months after the final session. It also includes 4 parent sessions of

CBT parent training. FRIENDS, like the Coping Cat “FEAR” plan, is an acronym. It stands for: Feeling worried, Relax and feel good, Inner thoughts, Explore plans of action, Nice work-reward yourself, Don’t forget to practice, & Stay cool (Barrett & Turner, 2001). Essentially the program breaks down into relaxation techniques, cognitive restructuring, attentional training, parent-assisted exposure, and family/peer support. The only significantly different component of FRIENDS is the inclusion of booster sessions and parent training sessions. Although the booster sessions are not likely to be a barrier in education settings, the parent training sessions could potentially be difficult. Regardless, the FRIENDS protocol has been demonstrated to produce positive treatment outcomes and is adaptable for group therapy. For example, Lieber et al. (2008) conducted a comparison between individual- and group-format treatment using the FRIENDS treatment protocol and found that there were no significant differences in the group and individual applications of delivery. However, FRIENDS could be potentially limiting to education settings due to the requirement of parent involvement. Due to the timing of the school day coinciding with the typical workday, finding time for parents to come to school and participate in sessions would be a challenge to implementation of FRIENDS.

The Emotion Detectives Treatment Protocol (EDTP), developed by Ehrenreich-May & Bilek (2012), is unique because it was designed specifically for group-format delivery. EDTP has a downside in terms of potential school-based implementation, in that it also includes a concurrent parent group during the course of treatment; however, it could possibly be modified to exclude that component if necessary. It relies upon peer engagement to reinforce abstract emotional concepts and their application for each group member. It uses games and social activities to promote learning about cognitive behavioral principles and to help with exposure goals. It comprises 15, 90-minute sessions with the group and is intended for children ages 7 -12.

Like Coping Cat and FRIENDS, EDTP is highly effective for youth with internalizing disorders. Bilek and Ehrenreich-May (2012), for example, investigated the feasibility and outcomes associated with using Emotion Detectives Treatment Protocol (EDTP) in a group of children ages 7 to 12 ($n = 22$). Results indicated that children experienced improvements in severity of anxiety disorders, the total anxiety and depression severity ratings, child-reported anxiety symptoms, and parent reported symptoms. At the end of treatment, 77.8% of participants no longer met criteria for an anxiety disorder, and only 1 of the 5 participants with depression maintained their diagnosis.

Present Study

Given the salient and pervasive ways that internalizing disorders can negatively impact an individual's life and ability to succeed (particularly in educational terms), research directed toward discerning base rates of these conditions in schools appears warranted. In particular, conducting examinations of large, diverse samples within the state of Mississippi could facilitate greater understanding of this problem in one of the most under-resourced states in the country. As already outlined, there are multiple legislative and policy regulations in place that would allow for treatment to be effectively and non-disruptively carried out in schools across the state. The purpose of the present study, therefore, is to learn about the degree to which such supports are needed in Mississippi public schools.

Methods

Participants. The present study included 10,891 students from public schools from around the state of Mississippi. Of the 10,891 students, 5,664 (52.0%) were female and 5,227 (48.0%) were male. By ethnicity, 53.7% were Caucasian, 37.9% were African American, 2.6% were Hispanic, 1.8% were Asian, and 4.1% marked other. Further, 2,944 (27.0%) were

elementary age (2nd - 5th grades), 4,808 (44.1%) were middle school age (6th - 8th grades), and 3,129 (28.9%) were high school age (9th - 12th grades).

Procedure. School districts from around the state of Mississippi gave consent for the present study to collect data from students. For students in grades 2-12, passive consent forms were sent home with all students at each school. If the consent form was not returned with a parental signature opting out of the survey, students were then given a battery of self-report measures of internalizing disorders (which were completed anonymously). Individual students also had the option of opting out at the time of the assessment.

Measures. Demographics included ethnicity, age, gender, and grade level were collected prior to the administration of clinical measures. The primary, and more comprehensive, measure used in the present study was the Revised Childhood Anxiety and Depression Scales (RCADS; Chorpita & Spence, 1998). The RCADS is a 47-questionnaire self-report measure about anxiety, depression, and obsessive-compulsive symptoms. The answers to each question are arranged as a 4-point Likert scale from “Never” (0) to “Always” (3). The RCADS includes 6 sub-score areas including major depressive disorder, generalized anxiety disorder, obsessive-compulsive disorder, panic disorder, separation anxiety disorder, and social phobia. Additionally, the measure produces a broad score for total anxiety (i.e., independent of specific domain). Reliability data from the initial psychometric publication suggest that the RCADS has high reliability, especially when compared to previously developed measures (Chorpita et al., 2000). Those initial results showed that the reliability coefficient for SAD was 0.75, 0.80 for social phobia, 0.65 for OCD, 0.76 for panic disorder, 0.79 for GAD, and 0.77 for major depressive disorder.

Results

Mean Scores. T scores of the individual and overall scales were calculated from the RCADS response data. The mean score for group 1 (2nd - 5th grades) on the overall RCADS was 51.37 (SD = 12.57). For the same group, rates hovered at or below a non-clinical average of 50 or lower for all sub-measures except for depression (M = 56.45; sd = 13.48), panic disorder (M = 53.23; sd = 12.89), and separation anxiety disorder (M = 53.66; sd = 12.56). Between boys and girls there were not significant differences in symptom reporting in the means. For group 2 (6th - 8th grades), the mean for overall RCADS scoring was 44.07 (sd = 13.62). Only separation anxiety in this group was elevated (M = 51.14; sd = 12.04). However, girls measured significantly higher than boys in obsessive-compulsive disorder in this group, despite the mean T score being below 50. For females the mean in this group for obsessive-compulsive disorder was 46.34 (sd = 11.37) while it was 44.71 (sd = 10.80) for boys. Group 3 (9th - 12th grade) had an overall mean score of 44.14 (sd = 14.63). Students in this group were elevated in separation anxiety disorder (M = 52.37; sd = 14.62). Like group 2, females from group 3 had a higher mean t-score for obsessive-compulsive disorder than males from group 3. The average female T score for obsessive-compulsive disorder was 47.56 (sd = 11.96), while the average male T score for the same sub-category was 45.07 (sd = 12.01). Another gender disparity appears in generalized anxiety disorder symptoms; the female average T score in group 3 was 43.15 (sd = 11.37), while the average male T score was 40.65 (sd = 10.98).

Percentage Rates of Clinical Depression. The percentage of students experiencing clinical depression (i.e. depression at elevated and diagnosable levels) was 15.60% in group 1, 9.80% in group 2, and 9.80% in group 3. In group 1, boys reported a rate of 18.10% with clinical depression while girls reported a rate of 13.20% . In group 2, the rate of depression among boys

was 10.10%, and among girls the rate was 9.60%. In group 3, boys reported clinical depression rates of 8.90%, while girls reported 10.90% rates.

Percentage Rates of Clinical Anxiety. The percentage of students experiencing clinical anxiety (i.e., anxiety at elevated and likely diagnosable levels) as measured by the Total Anxiety overall scale was 7.60% in group 1, 4.30% in group 2, and 5.20% in group 3. Boys (8.50%) reported higher rates of clinical anxiety than girls (6.70%) in group 1. In group 2, girls (4.50%) and boys (4.10%) had comparable rates of clinical anxiety. Similarly, in group 3, boys and girls had the same rate of anxiety (5.20% in both cases).

Percentage Rates of Clinical General Anxiety Disorder. The percentage of students experiencing clinical levels of generalized anxiety disorder symptoms was 4.20% in group 1, 3.40% in group 2, and 2.50% in group 3. Boys (5.60%) reported higher rates of clinical anxiety than girls (2.90%) in group 1. In group 2, girls (3.40%) and boys (3.50%) had comparable rates of clinical anxiety. In group 3, boys (2.40%) and girls (2.70%) again showed comparable rates of GAD.

Percentage Rates of Clinical Panic Disorder. The percentage of students experiencing clinical levels of panic disorder symptoms was 11.80% in group 1, 7.80% in group 2, and 9.90% in group 3. In group 1, Boys (11.50%) had comparable rates to girls (12.00%). In group 2, girls (7.70%) and boys (8.00%) had comparable rates of clinical panic disorder symptoms. In group 3, girls (10.70%) experienced clinical levels of panic disorder symptoms more frequently than boys (9.10%).

Percentage Rates of Clinical Separation Anxiety. The percentage of students experiencing clinical levels of separation anxiety symptoms was 11.00% in group 1, 8.60% in group 2, and 10.60% in group 3. In group 1, boys reported an 11.50% rate of clinical separation

anxiety symptoms, while girls reported a lower 10.60% rate. In group 2, girls (8.40%) and boys (8.80%) had comparable rates of clinical anxiety. In group 3, boys had a higher rate of clinical separation anxiety symptoms at 12.20% than girls who had 9.20% rate.

Percentage Rates of Clinical Social Anxiety. The percentage of students experiencing clinical levels of social anxiety symptoms was 5.10% in group 1, 1.90% in group 2, and 1.50% in group 3. Boys (6.20%) reported higher rates of clinical anxiety than girls (4.10%) in group 1. In group 2, girls (2.00%) and boys (1.90%) had comparable rates of clinical anxiety. In group 3, boys (1.40%) and girls (1.60%) again showed comparable rates of GAD.

Percentage Rates of Obsessive-Compulsive Disorder. In group 1, 7.20% of students had clinically significant levels of obsessive-compulsive symptom experience. In group 2, the rate of clinically significant obsessive-compulsive symptom experience was 3.40% of students. In group 3, the rate of clinical experience of obsessive-compulsive symptoms was 5.30% of students. In boys, obsessive-compulsive rates were 8.00% in group 1, 2.30% in group 2, and 4.6% in group 3. In girls, rates were 6.40% in group 1, 4.50% in group 2, and 5.90% in group 3.

Discussion

The results show that clinical levels of anxiety and depression are serious issues among Mississippi students. Panic disorder had the most elevated symptom experience rates at 9.80% on average between the three groups; however, the base rate for panic disorder in the population at large is close to 4.70% (Chorpita, 2007, p. 16). Similar disparities were notable between local and national averages in depression, which has a national base rate of 1.00 - 2.00% before puberty (Charles & Fazeli, 2017). In group 1 of this study, which comprised 2nd through 5th grade children (i.e., before puberty), however, the rate of clinical depression was 15.60%. After

puberty, the base rate of depression typically increases to 4.00 - 5.00% (Charles & Fazeli, 2017), but students in the current study in both groups 2 and 3 (i.e. during and after puberty), exhibited a base rate of 9.8%. Obsessive-Compulsive Disorder has a base rate of somewhere between 0.80% and 4.00% in children and adolescents (Chorpita, 2007, p 16); however, the present study found that in Mississippi, the average rate between all three age groups was 5.30%. Separation anxiety has a prevalence estimate of 3.50 - 12.90%. In Mississippi, students averaged across all groups a 10.07% rate, sitting at the upper end of the estimate. Only one category of the RCADS screener showed that students had average to low-average rates (that being social anxiety). Mississippi students in this sample exhibited a 2.83% base rate, which is on the lower end of the normal range of 1.10 - 6.30% estimated rate of clinical symptom experience.

There are many potential factors in the elevated levels of internalizing symptoms that Mississippi students experience. One potential factor is the extremely high rates of poverty and low-income status among families in the state. As previously outlined in the literature review, financial insecurity and the associated difficulties (i.e. familiar instability, food insecurity, and situational instability) are likely to increase a child's risk of developing any type of psychopathology. Another potential factor in the elevated rates of symptoms reported is lack of psychological education. Students participating in this survey may not have adequately understood all items of the questionnaire due to lack of emotional and psychological health education within health classes and earlier general education, especially in the younger age group.

Given the lack of understanding, an important note must be made regarding the data from group 1 of the study. These students were 2nd through 5th grade students; therefore, certain items of the RCADS which ask about heart rate, feelings of depression, and panic may not be

understood well enough to yield accurate results. In fact, many studies have questioned the ability of children to accurately self-report depression symptoms. However, given that Trent et al. (2010) found the RCADS to be a reliable measure of major depressive disorder in these age groups in a large sample of children from Mississippi (i.e., this exact data set), this may not be the best explanation for the extremely elevated rates of depression in this age bracket.

Regardless of etiological interpretation, the overall findings of the present study show that there is definitively a need within the state education system for screening of and intervention for internalizing disorders. As previously outlined, internalizing disorders can cause an array of disruptive and cyclical problems impacting the social, emotional, and educational prowess of students. As this impacts Mississippi students, the findings indicate that many children and adolescents in the state are likely facing developmental challenges in their social and educational spheres. Because children in the top quartile of anxiety scores are nearly eight times more likely to be in the lowest quartile of reading achievement and two-and-a-half times more likely to be in the lowest quartile in math achievement later in their educational efforts, the reasonable conclusion is that Mississippi's status as one of the most underperforming school systems in the nation may be partially attributed to the absence of any psychoeducational, diagnostic, or treatment-directed initiative to serve students. This is particularly salient in the context of such high rates of elevation for most of the conditions measured. Moreover, children with clinical levels of anxiety have also been shown to exhibit significantly higher school absenteeism compared to non-disordered peers. School absenteeism not only increases and exacerbates the aforementioned scholastic difficulties, but also increases the longitudinal risk for students to drop out of school altogether. Since Mississippi has one of the highest rates of dropout in the nation, it is also likely that internalizing disorders play a role in the cessation of

education in some cases. For example, before students drop out of school they are likely also facing great emotional and social difficulty. To the extent that a child also experiences one or more emotional disorders, it is likely that the combination of these factors would facilitate underachievement, peer rejection, and/or a lack of educational attainment. All of these circumstances interact in ways that are harmful to both Mississippi students and to the educational system as whole, contributing to teacher frustration and poor overall ratings of schools based on student performance.

Furthermore, there is currently a legislative framework in place on both federal and state levels which support interventions aimed at early detection and treatment of internalizing disorders. These policies fully intersect the current findings in that the identified rates of symptoms in Mississippi are generally much higher than the national average. The first step towards realizing the full potential of the policies in place in terms of assisting students is enforcing the infusion of resources into general curriculum at an early age. For example, psychoeducation curriculum beginning as early as Kindergarten and continuing until graduation from high school may be a simple intervention that provides greater psychological health literacy and reduces long-term emotional difficulties. Children who understand their own emotional states, have a grasp of normative feelings and behaviors, and have respect for the treatment of abnormal psychological states are children who can monitor and self-report on their own psychological well-being. The second step would be initiating screening procedures using self-report questionnaires or computer-based screeners to be scored by district psychometrists, school counselors, or other existing qualified personnel. The final, and most challenging step, is initiating a treatment program. Given the literature review, the two best solutions for Mississippi's underfunded school districts are computer-based CBT interventions and group

therapy interventions. In the former, computer software applied to classroom computers could be a cost and time effective solution for treatment. In the latter, a counselor or other mental health provider could follow and adapt a manual of treatment (e.g., Coping Cat; Unified Protocol; FRIENDS) to conduct group treatments for groups consisting of students with similar internalizing symptoms (i.e. Obsessive-Compulsive Disorder, Depression, Generalized Anxiety Disorder). Potentially, counselors could facilitate 1 group, once a week, for 8 weeks until the end of a semester, which could help many children achieve symptom reduction and establish a trajectory toward improved and adaptive emotions, behaviors, and educational progress.

There are a few limitations of the present study that merit discussion. One of the limitations is that the data collected are strictly symptom-based and do not include information about treatment, effectiveness of treating in schools, or ability of education professionals to conduct treatment. Furthermore, the data set does not provide information about potential relationships between higher scores on the RCADS and student academic performances, which would be helpful in exploring whether or not symptoms are related to student success in this sample. Lastly, the current data set did not include a parent measure or a teacher measure (i.e., multi-informant method) to more firmly triangulate students with internalizing disorders. While most students may reliably self-report, more information allows for more accurate diagnoses.

Given this information, future directions of this research should be aimed at finding evidence for the best methods of screening for disorders among all age groups of students. Research should also focus on finding the most effective and resource-efficient treatment solutions for students and schools, since many studies do not include research on financial data and real-world feasibility of treatment options.

Personal Reflection

Having completed this project and reviewed all the data, I am now highly motivated to advocate for better mental health care practices in the state of Mississippi in more integrated settings, primarily schools. Through my research, I found evidence that not only is early intervention critical for a child's ability to prosper into adulthood but it is encouraged by federal and state policy. Knowing this, I feel it is important for me to continue conducting research to determine the most efficient way for state education systems to provide mental health resources to students. There is very little research focused on the fiscal and time costs of mental health care in schools, so, moving forward, I would like to focus on those aspects in addition to finding evidence for the best treatment methods with far reaching impact. During the final phase of completing this thesis, I was accepted into the Ph.D. program in Clinical Psychology at the University of Mississippi. Completing this thesis has significantly informed the trajectory of my graduate research and emphasis of my studies; my hope is to continue this research and begin building relationships with neighboring communities and schools in order to encourage and promote mental health care in educational settings for the state of Mississippi and, potentially, beyond.

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